

Abstract

[0001] In a method of spectroscopically analyzing a sample, a plasma is generated. A magnetic field is generated by a magnetic dipole wherein the plasma is confined within the magnetic field. Sample atoms are introduced into the plasma wherein energized atoms of the sample are confined. The spectral composition or mass-to-charge ratio of the energized sample atoms is analyzed. In a spectroscopic system a magnetic dipole has an associated magnetic field. A plasma is confined within the magnetic field and a sample of energized atoms introduced into the plasma. A spectrometer analyzes the energized atoms for the mass-to-charge ratio or for their spectral composition.